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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,544	12/14/2005	Breda Mary Cullen	JJM5011USPCT	6443
27777 PHILIP S. JO		10/01/2007 EXAMINER		
JOHNSON &		7 A	JJM5011USPCT 6443	
	SWICK, NJ 08933-7003		ART UNIT	PAPER NUMBER
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			10/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)				
	10/560,544	CULLEN ET AL.				
Office Action Summary	Examiner	Art Unit				
	Nissa M. Westerberg	1609				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with th	e correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
1) Responsive to communication(s) filed on						
3) Since this application is in condition for allowar	ince this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under E	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims						
<ul> <li>4)  Claim(s) 1 - 13 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdrawn from consideration.</li> <li>5)  Claim(s) is/are allowed.</li> <li>6)  Claim(s) 1 - 13 is/are rejected.</li> <li>7)  Claim(s) is/are objected to.</li> <li>8)  Claim(s) are subject to restriction and/or election requirement.</li> </ul>						
Application Papers						
9) The specification is objected to by the Examine	<b>T</b> .	• •				
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
	Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).					
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
Priority under 35 U.S.C. § 119						
<ul> <li>12)  Acknowledgment is made of a claim for foreign a)  All b)  Some * c)  None of:</li> <li>1.  Certified copies of the priority documents</li> <li>2.  Certified copies of the priority documents</li> <li>3.  Copies of the certified copies of the prior application from the International Bureau</li> <li>* See the attached detailed Office action for a list of the priority documents</li> </ul>	s have been received. s have been received in Applic ity documents have been rece (PCT Rule 17.2(a)).	ation No ived in this National Stage				
Attachment(s)	•					
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3 sheets.	4) Interview Summa Paper No(s)/Mail 5) Notice of Informa 6) Other:	Date				

**Art Unit: 1609** 

#### **DETAILED ACTION**

### Status of Claims

Claims 1 – 13 are pending and are currently under examination.

# Claim Rejections - 35 USC § 112 2<sup>nd</sup> Paragraph

- 1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
  - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "at least about" is indefinite. "At least" means a minima whereas "about" indicates a range centered on the value. Therefore, what values are included in "at least about" is unclear and the metes and bounds of the claims cannot be determined.
- 3. Claim 13 recites the limitation "the material has a free radical activity in the diphenylpicrylhydrazyl (DPPH) test for antioxidant activity as herein defined" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim. The claims should be able to stand alone and importation of limitations from the specification should not be required to determine the metes and bounds of the claims.

# Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. Claims 1 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain et al. (EP 0 368 253).
- Partain et al. teaches delivery systems comprising aminopolysaccharides such as chitosan derivatives (col 2, ln 32 35) and glycosaminoglycans such as hyaluronic acid, chondroitin sulfate and heparin (col 8, ln 55 59). Compositions comprising chitin and chitosan are useful in accelerating the healing rate of wounds (col 8, ln 35 38). Additionally, this delivery system can contain antiseptic agents such as acridine dyes (col 10, ln 12). The compositions can be applied to the skin as a pre-formed film or sponge (col 4, ln 1 4). The compositions of Partain et al. are not explicitly disclosed as being bioabsorbable. However, the dissolution is a property of the polysaccharide used and since the polysaccharides taught are the same, the delivery systems of Partain et al. are bioabsorbable.

Therefore it would have obvious to one of ordinary skill at the time of the instant invention with a reasonable expectation of success to prepare a composition comprising a bioabsorbable aminopolysaccharide with an antioxidant dyestuff.

Art Unit: 1609

6. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain et al. as applied to claims 1 – 6 above in view of Fowler et al. (US Patent 5,667,501).

As discussed above, Partain et al. teaches aminopolysaccharide compositions comprising acridine dyes. Partain et al. does not teach the amount of dye present or the free radical activity of the polymer.

Fowler et al. teaches wound dressing that contain chemically modified polymers. The base polymer does not possess the free radical activity but groups with the desired activity are added to the base polymer (col 2, ln 45 - 50). The free radical activity of the polymers in the DPPH test can be in the range of about 15 - 80% (col 2, ln 24 - 25).

Acridine dyes can be oxidized and therefore act as an antioxidant. Given the effective range of free radical activity taught by Fowler et al., it would have been to obvious to one of ordinary skill in the art to add the antioxidant dyestuff at a level that resulted in an free radical activity in the effective range with a reasonable expectation of success.

7. Claims 8 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain et al. and Fowler et al. as applied to claims 1 – 7 and 13 above in further view of Nimrod et al. (WO 87/05517).

As discussed above, Partain et al. teaches delivery systems comprising aminopolysaccharides such as chitosan derivatives (col 2, ln 32 – 35) and

Art Unit: 1609

glycosaminoglycans such as hyaluronic acid, chondroitin sulfate and heparin (col 8, In 55 – 59). In addition to antiseptic agents such as acridine dyes (col 10, In 12), this delivery system can also contain antibiotics (col 9, In 55). Fowler et al. teaches the desired free radical activity and therefore the amount of antioxidant present in the wound dressing.

Nimrod et al. teaches heavy metal salts of hyaluronic acid, an anionic polymer where the heavy metal can be silver (p 4, ln 27). Silver ions are effective antimicrobial agents without significant side effects that are rarely associated with silver antibiotic-resistant strains of bacteria. Silver salts are useful as topical anti-infectives or antiseptics (p 3, ln 7 - 13).

Given the teachings of Partain et al. and Nimrod et al., it would have been obvious to one of ordinary skill in the art at the time of the instant invention to prepare a composition comprising both a heavy metal salt of the polysaccharide and the acridine dye with a reasonable expectation of success given that both disclose wound dressing materials.

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain et al. and Fowler et al. as applied to claims 1 – 7 and 13 above in further view of Gibbins (US Patent 6,355,858 B1).

As discussed above, Partain et al. and Fowler et al. teaches aminopolysaccharide compositions comprising acridine dyes. Partain et al. does not

Art Unit: 1609

teach that the delivery vehicle is in the form a sheet or that the material is sterile and placed in a microorganism-impermeable container.

Gibbins teaches wound dressings that administer an active agent (col 4, ln 8 – 11). Active agents can include silver salts as an anti-microbial agent (col 7, ln 2). The matrix material can be cut from a sheet and sterilized by a number of methods (col 12, ln 52 – 65).

It would have been obvious to one of ordinary skill in the art with a reasonable expectation of success to take the wound dressing composition of Partain et al. and Fowler et al., form it into a sheet, cut to the desired pattern or shape, and then sterilize the wound dressing material as taught by Gibbins. Once sterile, it would be obvious to place the sterile material in a container or packaging to maintain the sterility of the matrix ("microorganism-impermeable container").

## **Double Patenting**

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated

Art Unit: 1609

by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 – 3 and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 4 and 13 of copending Application No. 11/608,553 in view of Partain et al. The claims of '553 recite wound dressings comprising a human recombinant collagen and an oxidized cellulose. The claims of the instant application recite a wound dressing material, which may be made of mixtures of collagen and oxidized cellulose with an antioxidant dyestuff. Partain et al. teaches aminopolysaccharide delivery systems (col 2, ln 32 – 35) comprising

acridine dyes as antiseptic agents (col 10, ln 12). Given that the compositions of Partain et al. can be used to dress wounds (col 8, ln 35 - 38), it would have been obvious to one of ordinary skill to add a dyestuff such as acridine with antioxidant properties to the compositions of '553 to arrive at the claims of the instant application.

This is a <u>provisional</u> obviousness-type double patenting rejection.

11. Claims 8 – 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 13 of copending Application No. 10/579,850 in view of Partain et al. The claims of '850 recite wound dressing materials comprising a polymeric substrate such as collagen, oxidized cellulose and other bioabsorbable materials with a silver salt and a dyestuff to stabilize the silver salt. That dyestuff may be antioxidant dyes such as aniline or acridine dyes (claims 8 and 9). Claims 8 – 10 of the instant application recite wound dressing materials comprising a solid bioabsorbable substrate with an antioxidant dyestuff, present in amounts ranging from about 0.2 to about 2% by dry weight, further comprising a silver salt. The specific disclosure of the claims of the instant application make obvious the generic claims in '850.

This is a provisional obviousness-type double patenting rejection.

12. Claims 8 – 10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 11 of copending Application No. 10/527,421 in view of Partain et al. The claims of '421 recite

Art Unit: 1609

wound dressing materials comprising complexes of anionic polymer with silver wherein the anionic polymer can anionic polysaccharides such as oxidized cellulose and other cellulose derivatives. Partain et al. teaches aminopolysaccharide delivery systems (col 2, ln 32 – 35) comprising acridine dyes as antiseptic agents (col 10, ln 12). Given that the compositions of Partain et al. can be used to dress wounds (col 8, ln 35 – 38), it would have been obvious to one of ordinary skill to add a dyestuff such as acridine with antioxidant properties to the compositions of '421 to arrive at the claims of the instant application.

This is a <u>provisional</u> obviousness-type double patenting rejection.

13. Claims 1 – 3 and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5 – 8 and 10 – 13 of copending Application No. 10/528,262 in view of Partain et al. The claims of '262 recite a wound dressing composition comprising chitosan and oxidized cellulose. These are two bioabsorbable polymers that are bioabsorbable substrates in the instant application. Partain et al. teaches aminopolysaccharide delivery systems (col 2, ln 32 – 35) comprising acridine dyes as antiseptic agents (col 10, ln 12). Given that the compositions of Partain et al. can be used to dress wounds (col 8, ln 35 – 38), it would have been obvious to one of ordinary skill to add a dyestuff such as acridine with antioxidant properties to the compositions of '262 to arrive at the claims of the instant application.

This is a provisional obviousness-type double patenting rejection.

Art Unit: 1609

### **Conclusion**

Claims 1 – 13 are rejected. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nissa M. Westerberg whose telephone number is (571) 270-3532. The examiner can normally be reached on M - F, 7:30 a.m. - 5 p.m. ET. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718 or Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Page 11

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Cacilia J. Toang

Registrioory Patent Examiner
Technology Center 1600